MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016 / 2017

PCA0074 - COMPUTER APPLICATIONS IN BUSINESS/ PCA0075 - COMPUTER APPLICATIONS AND WEB DESIGN

(Foundation in Management, Foundation in English)

8 MARCH 2017
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **FOUR pages** excluding the cover page.
2. Attempt **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Write your answers in the Answer Booklet.

QUESTION 1 [20 Marks]

a. "Superamoi Sdn Bhd" is an animation company started by a few MMU students. They achieved with huge success after the release of their most recent animation. They are expanding the company and establishing a new headquarters which will house their entire company, from administration to production. State **FOUR (4)** types of computers and how each may be used at "Superamoi".

(8 marks)

b. When rendering the high resolution 3D graphics in their animations, some of the computers at "Superamoi" shuts down suddenly. What is the main source of heat in the system unit? Also state **TWO (2)** cooling technologies that can help mitigate this problem.

(3 marks)

c. At "Superamoi", artists need to do a lot of digital drawing and sketching of characters and scenes for the animation.

i) State **THREE (3)** types of input devices for drawing.

(3 marks)

ii) Describe how each can be used for digital drawing.

(3 marks)

iii) Rank your choices from best to worst in terms of suitability for digital drawing.

(3 marks)

QUESTION 2 [20 Marks]

a. One of your friends came up to you exclaiming that the university just purchased 3-D printers which he thinks will allow us to print 3D scenes onto a piece of paper which will 'come to life when moved from side to side.'

i) What is wrong with your friend's statement?

(1 mark)

ii) How do 3-D printers work?

(2 marks)

b. For the **FOUR (4)** storage devices listed below, identify which ones require physical motion to read and store data and which ones do not.

i) Hard Disk (HDD)
ii) Solid State Disk (SSD)
iii) CD-ROM
iv) USB Flash Drive

(4 marks)

c. Many operating systems are modifications of existing operating systems, and this is especially true in the UNIX / Linux group of operating systems. State **THREE (3)** of these operating systems and what they are based on.

(6 marks)

Continued...

d. For each of the software listed below, identify the category of programs or apps which they belongs to.

i) Pokémon GO
ii) Microsoft Excel
iii) Google Slides
iv) WhatsApp
v) Kaspersky Anti-Virus
vi) Disk Defragmenter
vii) Paint.net

(7 marks)

QUESTION 3 [30 Marks]

a. Top level domain refers to the last segment of a domain name. For example, .com for commercial firms, .edu for educational institutions, .org for Nonprofit organizations, etc. Give **THREE (3)** actual URLs of a commercial company(.com) and 3 examples of educational institutions (.edu) in Malaysia.

(6 marks)

b. Wireless networks have made mobile computing possible by eliminating the need for physical connections. However, there are problems unique to wireless networks, especially older ones. Briefly describe just **ONE (1)** of these problems.

(4 marks)

c. The Internet has dramatically revolutionised many different fields. It has become a global means of communication in our everyday lives. Describe briefly **FIVE (5)** ways which the Internet has profoundly changed our daily lives.

(10 marks)

QUESTION 4 [20 Marks]

a. Alex is a new user to the Internet. He wants to download some images using Google Chrome. He came across several different types of image format such as JPEG, GIF and PNG. Tabulate the differences between these formats and explain in the aspect of transparency and colors.

(4 marks)

b. Bitmap images (also known as raster images) are made up of pixels. Pixels are picture elements which are tiny dots of individual color that makeup what we see on screen. Vector images are represented differently. Discuss how are vector images better than bitmap images?

(6 marks)

c. Mary has just ventured into business selling women's accessories. She has decided to create a website to sell her products. Advice Mary on the multimedia elements she can include in her website. Give a short description on each element.

(10 marks)

Continued...

QUESTION 5 [20 Marks]

Read the following two cases carefully.

Case A	Dan prepared an email which looks like a system email from MMU's Campus Management System (CaMSys). He sent the email to one of MMU's Exam and Records Unit (ERU) staff. The email provided a link which redirected the staff to a fake website through which Dan managed to capture the staff's username and password. Using this information, he logged into CaMSys to change the grades of a subject he failed to pass.
Case B	Ana discovered that one of the apps MMU published on the app store is transmitting student IDs, passwords and other data in plain text over the campus wireless network. She wrote a script which collected all the pairs of usernames and passwords. Without using any of these passwords, she submitted the list to MMU to prove to the IT team and warn them that there is a major security issue.

a. Referring to Case A:
   i. Based on his actions, Dan is a _____.
   (1 mark)
   ii. Why do you say so?
   (2 marks)
   iii. What is the method through which Dan obtained the staff's username and password?
   (1 mark)
   iv. This kind of intrusion into a computer system is a failure in _____ _____.
   (1 mark)
   v. What are two alternate authentication methods which avoid problems with theft of username and password?
   (2 mark)

a. Referring to Case B:
   i) Based on her actions, Ana is a _____.
   (1 mark)
   ii) Why do you say so?
   (2 marks)
   iii) What kind of theft happened in Case B?
   (1 mark)
   iv) What should MMU's IT team do about the app's transmission of data in order to prevent this kind theft from happening again? Briefly describe the process involved.
   (3 marks)

Continued...

b. Dan boasted to a friend one day that he can also access other people's machines by, "spamming a bunch of people with a trojan horse to install a root kit". Briefly explain the terms below:
   i) spam
   ii) trojan horse
   iii) root kit

(6 marks)

End of Paper